REMARKS

Allowable Subject Matter

Applicants greatly appreciate the indication that claims 3-5, 14, 15, 18-24, 27, 34-36, 29 and 43 recite allowable subject matter.

Claim Status

Claims 1-39 and 42-44 are pending with this amendment.

Claims 40 and 41 have been canceled herein without prejudice to the subject matter recited therein. We expressly traverse the rejection of these claims and reserve the right to file one or more continuing applications targeting this and other subject matter.

Claim 1 has been amended in independent form. The claim amendments direct the scope of the claim to alternative areas, while broadening some aspects of the claims (e.g., image and video).

Claims 14, 16, and 28 have been rewritten in independent form. No change in claim scope is intended by the mere formal re-writing of these claims except for broadening them to explicitly refer to video.

Claims 7, 8, 10, 12, 21, 22, 23, 42, and 43 have been amended in an editorial manner and not in response to the art or any formal rejection. For example, the phrase "the steps of:" and "step of" have been removed.

Specification

The specification has been amended to include corresponding patent and publication numbers.

Art-based Rejections

Claims 1, 2, 6-13, 16, 17, 25, 26, 28-33, 37, 38, 42 and 44 stand rejected as being anticipated or obvious variously over U.S. Patent Nos. 5,930,369 (hereafter referred to as "the Cox Patent"), 6,314,192 (hereafter referred to as "the Chen Patent"), 6,108,434 (hereafter referred to as "the Cox2 Patent"), 6,360,000 (hereafter referred to as "the

Collier Patent"), 6,181,802 (hereafter referred to as "the Todd Patent") and 5,742,704 hereafter referred to as "the Suzuki Patent"). We respectfully traverse these rejections.

Claim 1

Claim 1 recites, in combination with its other features, that the probability factor represents or describes a characteristic of the image or video. Blocks are selected based on the probability factor to obtain watermark data.

The Cox patent, in contrast, seems dependent on an original image for watermark retrieval, e.g., as discussed at Col. 9, line 53-59.

The recited method of claim 1 is not so dependent. Instead, based on a probability factor that represents or describes a characteristic of the image or video, blocks are selected for watermark detection.

We respectfully request that claim 1 be allowed.

Claim 16

Claim 16 recites a method including discussion of a probability factor to select a plurality of detection blocks in watermarked imagery or video. The probability factor includes a probability of watermark detection based on a variance distribution.

The cited passage in the Cox patent (i.e., Col. 11, 1-5), in contrast, discuses the composition of a watermark (with a uniform distribution) and not a probability factor for watermark detection that is based on a variance distribution.

We respectfully request that claim 16 be allowed.

Claim 28

Claim 28 recites a method including discussion of a probability factor to select a plurality of detection blocks in watermarked imagery or video. The probability factor is determined adaptively based on at least one of processor speed, available memory and processing time requirements.

While the Cox2 patent discusses a "memory savings" due to a particular implementation, the cited passage does not teach or suggest a probability factor being determined adaptively based, e.g., on available memory.

We respectfully request that claim 28 be allowed.

Claim 42

Claim 42 recites a method to select at least one region for detection of a watermark signal. The method includes determining variance for each region in an image neighborhood and comparing the variance of each neighborhood region to a first threshold. The method further recites selecting a central region in the neighborhood when the variance of at least some of the neighborhood regions is greater than the first threshold.

The Suzuki patent is cited at col. 6, lines 55-67 and col. 7, lines 1-9 as teaching the above combination. We note that the cited passages are not dealing with watermark detection based variance characteristics of a neighborhood region, but rather add to a larger system of noise reduction.

Todd is also silent in this regard.

(We expressly object to the combination of Suzuki with the other patents discussed herein. There is no suggestion of combining the documents as suggested.).

We respectfully request that claim 42 be allowed.

Claim 44

Claim 44 recites a method of using probability factors to select detection blocks in an image. The detection blocks are to be analyzed to detect a digital watermark embedded in the image. The method recites requiring a minimum distance between any two selected detection blocks; requiring a minimum variance separation between at least two of the selected detection blocks; requiring a minimum border distance between at least one selected detection block and an image border; and before selecting a detection block, requiring at least some of the detection block's neighboring blocks meet at least a minimum threshold variance requirement.

The cited passages of the Suzuki patent, as discussed above, are not understood to even contemplate watermark detection, let alone selecting detection blocks based on the features outlined in the claims.

The Chen patent is similarly deficient.

We respectfully request that claim 44 be allowed.

Conclusion

An early notice of allowance is respectfully requested. (Other deficiencies of the art need not be belabored at this time.). Nevertheless, the Examiner is invited to telephone the undersigned at 503-469-4685 if any questions arise.
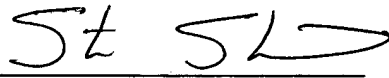
Date: April 1, 2005

Respectfully submitted,

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